REMEDIATION OF CONTAMINATED SEDIMENT IN THE DETROIT RIVER CONNER CREEK AREA - DETROIT, MICHIGAN

Executive Summary

Contaminated sediments were identified as a key problem in the Detroit River (UCLCCS 1988, Detroit River Area of Concern Update Report 1999). Most of the 15 beneficial use impairments of the Detroit River were related to fish (e.g., contamination in fish tissue, tumors on fish). Recent research indicates that there is a direct correlation between sediment contamination in the Detroit River and contaminant concentrations in the tissue of fish.

This proposal focuses on remediating contaminated sediment along the Detroit River shoreline downstream of Conner Creek. Conner Creek is a well-recognized long-standing source of contaminants into the Detroit River Area of Concern. Conner Creek was partially dredged for the first time in fifty years in 2003. Plans from the City of Detroit (**Appendix A**) call for the entire length of Conner Creek to be dredged from the retention basin under construction to its the mouth and approximately 100 feet out into the Detroit River in 2004.

A former railway property, private company dock, and boat club on the Detroit River are immediately downstream of the mouth of Conner Creek. In March, 2004, an informational hydrographic survey was conducted of the Detroit River shoreline downstream of Conner Creek. The survey (**Appendix B)** indicates substantial shoaling along the Detroit River shoreline and into the private company intake channel. This shoaling along the Detroit River shoreline is assumed to be contaminated sediment build-up, which has been discharged from Conner Creek over the past several decades.

In November, 1997 and June, 1998, the Michigan Department of Environmental Quality's Surface Water Quality Division and the U. S. EPA - GLNPO conducted sediment sampling in Conner Creek adjacent to the Detroit River. The sampling was conducted in order to assess the levels of contaminants in the sediments as part of the overall sediment assessment of the Detroit River (**Appendix C**). According to the MDEQ staff report "Sediments were found to be extremely contaminated". The data shows that PCBs are present in the sediments. PCB concentrations in sediment cores (up to 5.5') ranged from 2.7 ppm to 23.5 ppm. "Heavy metals … found at the highest levels measured in recent surveys of the Detroit River.... Polycyclic aromatic hydrocabons and oil and grease were also at extremely high levels". The bioaccumulative and toxic guideline exceedances (TOTAL BIOTOX) ranged from a low of 35.5 to 143.0 (i.e., 143 times above the severely contaminated level).

Because Conner Creek is recognized as a major source of contaminants (for example, PCBs and mercury) in the Detroit River, the built-up sediment in the depositional zone from Conner Creek downstream of this source is also a major source of contaminants in the Detroit River and requires remediation.

A private company offers to pay 35% of the cost of removing contaminated sediment from the Detroit River shoreline (100 feet from the dockface) from the mouth of Conner Creek to the west edge of the utility intake canal, a total of approximately 1,025 feet. The private company is committed to "on-the-ground" remediation of the Conner Creek depositional zone in the Detroit River described above. The preferred option is to remove the contaminated sediment in this area by environmental dredging of the contaminated material as indicated by a preliminary feasibility study of remedial alternatives.